REMARKS

The Examiner has objected to claims 2-19 and 21-37 as being dependent upon a rejected base claim, but also stated that such claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant has amended the claims in such a manner. Applicant has further consolidated and clarified the limitations of claims 10-12 and claims 28-30 in claims 10 and 28, respectively. See also claim 38.

An allowance is therefore respectfully requested.

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 505-5100. For payment of the fees due in connection with the filing of this paper, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1351 (Order No. NVIDP013). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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**APPENDIX A**



Please cancel claim 1.

2. (Amended) [The method as recited in claim 1, and further comprising] A method for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

identifying a plurality of geometrically arranged coordinates;

computing a distance value based on the geometrically arranged coordinates;

calculating a LOD value using the distance value for use during computer graphics processing; and

estimating a derivative value based on the geometrically arranged coordinates, wherein the distance value is computed based on the derivative value.

3. The method as recited in claim 2, wherein the geometrically arranged coordinates include ($z_0$, $z_1$, $z_2$, $z_3$) which are representative of a quadrilateral with $z_0$ being an upper left corner of the quadrilateral, $z_1$ being an upper right corner of the quadrilateral, $z_2$ being a lower left corner of the quadrilateral, $z_3$ being a lower right corner of the quadrilateral.

4. The method as recited in claim 3, wherein the quadrilateral is a 2x2 pixel quadrilateral.

6. The method as recited in claim 3, wherein the derivative value is a derivative with respect to an x-axis.

7. The method as recited in claim 6, wherein the derivative value is calculated using the expression $((z_1 - z_0) + (z_3 - z_2))/2$.

8. The method as recited in claim 3, wherein the derivative value is a derivative with respect to an y-axis.

9. The method as recited in claim 8, wherein derivative value is calculated using the expression $((z_2 - z_0) + (z_3 - z_1))/2$.

10. (Amended) [The method as recited in claim 1, wherein the geometrically arranged coordinates are texture coordinates $(u_0, u_1, u_2, u_3)$] A method for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

identifying a plurality of texture coordinates;

computing a distance value based on the texture coordinates; and

calculating a LOD value using the distance value for use during computer graphics processing.

Please cancel claims 11-12.

13. The method as recited in claim 2, wherein the LOD value is calculated for dependent textures.

14. (Amended) [The method as recited in claim 1,] A method for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

identifying a plurality of geometrically arranged coordinates;

computing a distance value based on the geometrically arranged coordinates; and

calculating a LOD value using the distance value for use during computer graphics processing;

wherein the LOD value is calculated for cube environment mapping.

15. (Amended) [The method as recited in claim 1, and further comprising] A method for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

identifying a plurality of geometrically arranged coordinates;

computing a distance value based on the geometrically arranged coordinates;

calculating a LOD value using the distance value for use during computer graphics processing;

determining if the geometrically arranged coordinates reside on separate sides of a cube map[,]; and

performing a coordinate space transform if the geometrically arranged coordinates reside on separate sides of the cube map.

16. (Amended) [The method as recited in claim 1, and further comprising] A method for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

identifying a plurality of geometrically arranged coordinates;

computing a distance value based on the geometrically arranged coordinates;

calculating a LOD value using the distance value for use during computer graphics processing; and

determining if a sign of a q-value of a pixel associated with each coordinate is the same.

17. The method as recited in claim 16, and further comprising setting the LOD value to infinity if it is determined that the sign of the q-value of each pixel is not the same.

18. (Amended) [The method as recited in claim 1,] A method for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

identifying a plurality of geometrically arranged coordinates;

computing a distance value based on the geometrically arranged coordinates; and

calculating a LOD value using the distance value for use during computer graphics processing;

wherein the geometrically arranged coordinates include ($z_0$, $z_1$, $z_2$, $z_3$) which are representative of a quadrilateral with $z_0$ being an upper left corner of the quadrilateral, $z_1$ being an upper right corner of the quadrilateral, $z_2$ being a lower left corner of the quadrilateral, $z_3$ being a lower right corner of the quadrilateral.

19. The method as recited in claim 18, and further comprising transforming the geometrically arranged coordinates to a different coordinate system (l,m,n), wherein the distance value is estimated using an expression selected from the group of $(l_1 - l_0)^2 + (m_1 - m_0)^2 + (n_1 - n_0)^2$, $(l_2 - l_0)^2 + (m_2 - m_0)^2 + (n_2 - n_0)^2$, $(l_3 - l_1)^2 + (m_3 - m_1)^2 + (n_3 - n_1)^2$, and $(l_3 - l_2)^2 + (m_3 - m_2)^2 + (n_3 - n_2)^2$.

Please cancel claim 20.

21. (Amended) [The computer program as recited in claim 20, and further comprising] A computer program embodied on a computer readable medium for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

a code segment for identifying a plurality of geometrically arranged coordinates;

a code segment for computing a distance value based on the geometrically arranged coordinates;

a code segment for calculating a LOD value using the distance value for use during computer graphics processing; and

a code segment for estimating a derivative value based on the geometrically arranged coordinates, wherein the distance value is computed based on the derivative value.

22. The computer program as recited in claim 21, wherein the geometrically arranged coordinates include $(z_0, z_1, z_2, z_3)$ which are representative of a quadrilateral with $z_0$ being an upper left corner of the quadrilateral, $z_1$ being an upper right corner of the quadrilateral, $z_2$ being a lower left corner of the quadrilateral, $z_3$ being a lower right corner of the quadrilateral.

23. The computer program as recited in claim 22, wherein the quadrilateral is a 2x2 pixel quadrilateral.

24. The computer program as recited in claim 22, wherein the derivative value is a derivative with respect to an x-axis.

25. The computer program as recited in claim 24, wherein the derivative value is calculated using the expression $((z_1 - z_0) + (z_3 - z_2))/2$.

26. The computer program as recited in claim 22, wherein the derivative value is a derivative with respect to an y-axis.

27. The computer program as recited in claim 26, wherein derivative value is calculated using the expression $((z_2 - z_0) + (z_3 - z_1))/2$.

28. (Amended) [The computer program as recited in claim 20, wherein the geometrically arranged coordinates are texture coordinates $(u_0, u_1, u_2, u_3)$] A computer program embodied on a computer readable medium for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

a code segment for identifying a plurality of texture coordinates;

a code segment for computing a distance value based on the texture coordinates; and

a code segment for calculating a LOD value using the distance value for use during computer graphics processing.

Please cancel claims 29-30.

31. (Amended) [The computer program as recited in claim 21,] A computer program embodied on a computer readable medium for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

a code segment for identifying a plurality of geometrically arranged coordinates;

a code segment for computing a distance value based on the geometrically arranged coordinates; and

a code segment for calculating a LOD value using the distance value for use during computer graphics processing;

wherein the LOD value is calculated for dependent textures.

32. (Amended) [The computer program as recited in claim 20,] A computer program embodied on a computer readable medium for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

a code segment for identifying a plurality of geometrically arranged coordinates;

a code segment for computing a distance value based on the geometrically arranged coordinates; and

a code segment for calculating a LOD value using the distance value for use during computer graphics processing;

wherein the LOD value is calculated for cube environment mapping.

33. (Amended) [The computer program as recited in claim 20, and further comprising] A computer program embodied on a computer readable medium for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

a code segment for identifying a plurality of geometrically arranged coordinates;

a code segment for computing a distance value based on the geometrically arranged coordinates;

a code segment for calculating a LOD value using the distance value for use during computer graphics processing;

a code segment for determining if the geometrically arranged coordinates reside on separate sides of a cube map[,]; and

a code segment for performing a coordinate space transform if the geometrically arranged coordinates reside on separate sides of the cube map.

34. (Amended) [The computer program as recited in claim 20, and further comprising] A computer program embodied on a computer readable medium

for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

a code segment for identifying a plurality of geometrically arranged coordinates;

a code segment for computing a distance value based on the geometrically arranged coordinates;

a code segment for calculating a LOD value using the distance value for use during computer graphics processing; and

a code segment for determining if a sign of a q-value of a pixel associated with each coordinate is the same.

35. The computer program as recited in claim 34, and further comprising a code segment for setting the LOD value to infinity if it is determined that the sign of the q-value of each pixel is not the same.

36. (Amended) [The computer program as recited in claim 20,] A computer program embodied on a computer readable medium for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

a code segment for identifying a plurality of geometrically arranged coordinates;

a code segment for computing a distance value based on the geometrically arranged coordinates;

a code segment for calculating a LOD value using the distance value for use during computer graphics processing;

wherein the geometrically arranged coordinates include ($z_0$, $z_1$, $z_2$, $z_3$) which are representative of a quadrilateral with $z_0$ being an upper left corner of the quadrilateral, $z_1$ being an upper right corner of the quadrilateral, $z_2$ being a lower left corner of the quadrilateral, $z_3$ being a lower right corner of the quadrilateral.

37. The computer program as recited in claim 36, and further comprising a code segment for transforming the geometrically arranged coordinates to a different coordinate system (l,m,n), wherein the distance value is estimated using an expression selected from the group of $(l_1 - l_0)^2 + (m_1 - m_0)^2 + (n_1 -$

$n_0)^2$, $(l_2 - l_0)^2 + (m_2 - m_0)^2 + (n_2 - n_0)^2$, $(l_3 - l_1)^2 + (m_3 - m_1)^2 + (n_3 - n_1)^2$, and $(l_3 - l_2)^2 + (m_3 - m_2)^2 + (n_3 - n_2)^2$.

38. (Amended) A system for calculating a level of detail (LOD) value for use during computer graphics processing, comprising:

[(a) ]logic for identifying a plurality of [geometrically arranged coordinates] texture coordinates;

[(b) ]logic for computing a distance value based on the [geometrically arranged coordinates] texture coordinates; and

[(c) ]logic for calculating a LOD value using the distance value for use during computer graphics processing.